



REFINERY ULSD ISSUES



SULFUR TEST METHODS (BOB SCHAEFER)



SULFUR CREDIT TRADING PROGRAM

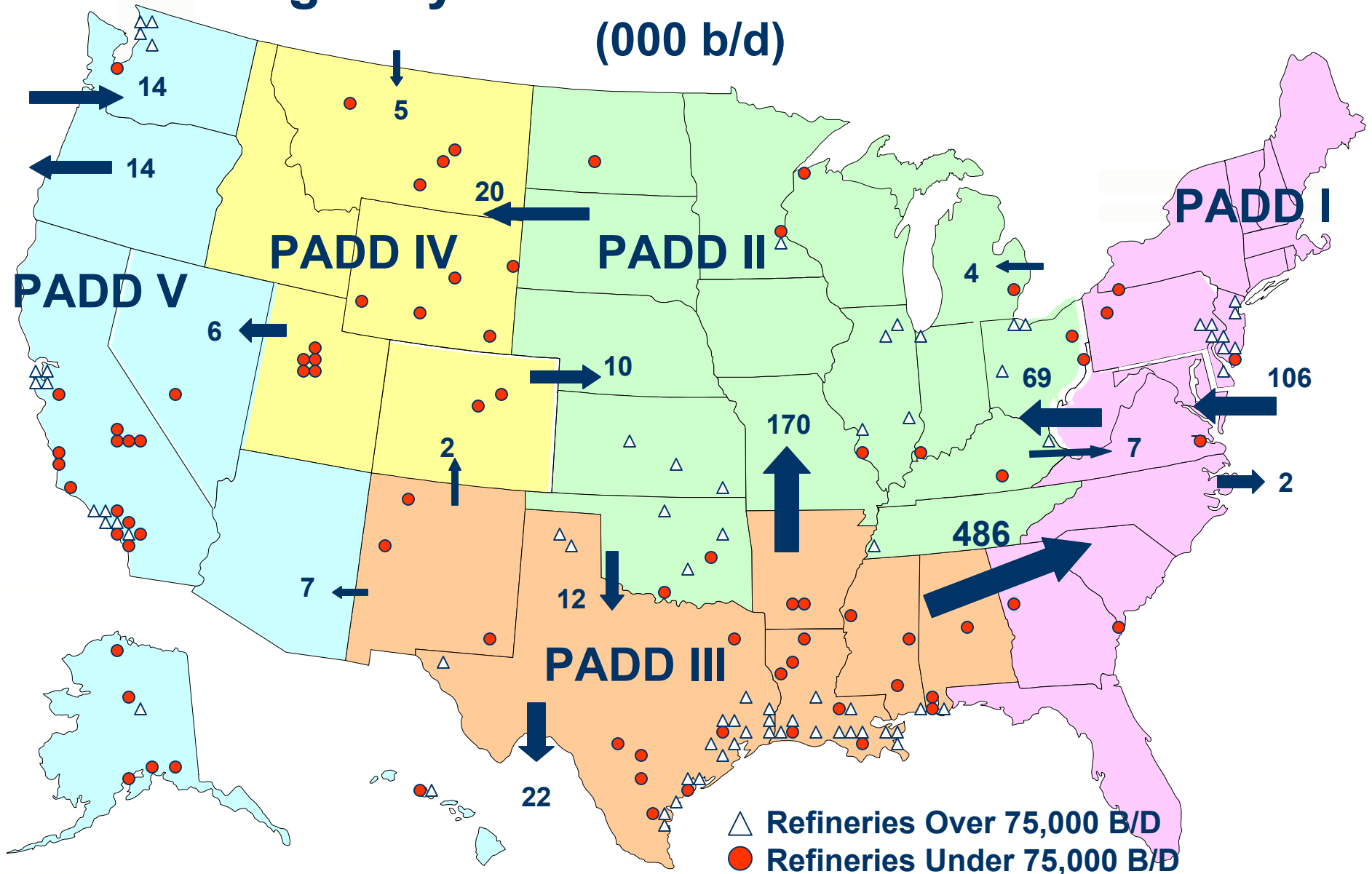
- ◆ CREDIT TRADING PROGRAM IS NECESSARY FOR TCO TO WORK
- ◆ PROGRAM NEEDS TO HAVE MAXIMUM FLEXIBILITY AND LIQUIDITY
- ◆ DISTRIBUTION SYSTEM LIMITATIONS WILL RESTRICT ABILITY TO PARTICIPATE

SULFUR CREDIT TRADING PROGRAM

- ◆ STATE ULSD PROGRAMS SHOULD BE CREDITED
- ◆ PADD SPECIFIC LIMITATIONS ON PRODUCTION ARE TOO RESTRICTIVE AND DON'T GUARANTEE WIDESPREAD ULSD
 - EPA SHOULD REMOVE PADD RESTRICTIONS

Highway Diesel Movements in 2001

(000 b/d)



NPRA 2002



DESULFURIZATION TECHNOLOGY





DISTRIBUTION TUTORIAL



PIPELINE ISSUES (MAP)



PIPELINE ISSUES (COLONIAL)



TERMINAL ISSUES

■ Terminal Concerns are similar to Pipeline Concerns

- Must have ability to verify that sulfur is below 17 ppm without sending a sample to an outside lab.
 - Test equipment must be used by current personnel
 - Suitable sulfur testing equipment is not currently available
- Need to redesign terminals and facilities to minimize contamination
- New or larger interface/transmix tanks will be required
- The ability to carry a 2nd grade of highway diesel will require new terminal tankage

CUMULATIVE ULSD LOSSES

- ◆ ULSD CAN BE LOST AT MANY POINTS IN THE REFINERY AND DISTRIBUTION SYSTEM
- ◆ SIZE OF LOSSES IS UNKNOWN
- ◆ ULSD CAN BE LOST TO LSD AND NOT IMPACT HIGHWAY SUPPLY
- ◆ ULSD AND LSD LOST TO HSD WILL EFFECT HIGHWAY SUPPLY
- ◆ EPA SHOULD DROP 20% DOWNGRADE LIMITATION
- ◆ EPA NEEDS TO QUANTIFY THE CUMULATIVE LOSSES SO THAT REFINERIES AND THE DISTRIBUTION SYSTEM CAN ADAPT

CUMULATIVE ULSD LOSSES

- ◆ POTENTIAL SOURCES OF ULSD LOSSES:
 - REFINERIES
 - DESULFURIZATION OPERATIONS
 - LOWER ENERGY VALUE OF ULSD
 - TURNAROUNDS AND UNEXPECTED SHUTDOWNS OF HYDROTREATERS
 - LINEFILLS TO PROTECT QUALITY
 - REPROCESSING OF OFF SPEC DIESEL/TRANSMIX
 - CONTAMINATION

CUMULATIVE ULSD LOSSES

- ◆ POTENTIAL SOURCES OF ULSD LOSSES:
 - DISTRIBUTION SYSTEM
 - INTERFACE/TRANSMIX
 - LINEFILL TO PROTECT QUALITY
 - CONTAMINATION
 - IN USE
 - FUEL ECONOMY PENALTY IN NEW ENGINES



RECOMMENDATIONS TO CDIRP PANEL



- ◆ CDIRP REPORT MUST AS A MINIMUM RECOGNIZE AND STATE THAT THESE ISSUES HAVE NOT BEEN ADDRESSED BY THE PANEL NOR IN EPA'S PROGRESS REPORT
- ◆ EPA NEEDS TO ESTABLISH A PROCESS TO ADDRESS THESE ISSUES
- ◆ EPA SHOULD REGULARLY REPORT ON THE PROGRESS OF THESE ISSUES